U.S. ENVIRONMENTAL PROTECTION AGENCY
Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

NPDES GENERAL PERMITS FOR CONCENTRATED ANIMAL FEEDING OPERATIONS (CAFO)

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PART I. PERMIT AREA AND COVERAGE

A. Permit Area

These permits cover all areas administered by Region 6 in the States of New Mexico (NMG800000), Oklahoma (OKG800000), and Texas (TXG800000) and all Indian Country lands in Oklahoma, Texas, and New Mexico without certification authority. The permits also cover the following Indian Country lands in New Mexico that have certification authority:

- Pueblo of Isleta
- Pueblo of Nambe
- Pueblo of Picuris
- Pueblo of Pojoaque
- Pueblo of Sandia
- Pueblo of San Juan
- Pueblo of Santa Clara, and
- Pueblo of Tesuque

B. Permit Coverage

1. Who needs to be covered under these permits?

A permit is required for any concentrated animal feeding operation (CAFO) that discharges or has the potential to discharge process wastewater to waters of the United States. However, this permit does not cover CAFOs in watersheds that have been impaired by CAFO-related activities. Such CAFOs must apply for coverage under the watershed-specific CAFO general permit.

2. What constitutes a discharge?

A discharge of waste/wastewater is the release of pollutants from a confinement and maintenance areas of a CAFO or a land application area which enters surface waters, such as a river, stream, creek, wetland, lake, or other waters of the United States. Discharges of process waste/wastewaters include, but are not limited to, the following:

- Contaminated runoff from corrals, stock piled manure, and silage piles;
- Overflow from storage ponds;
- Drainage of applied wastewater from land application areas;

- Contaminated runoff from fields on which manure has been applied by placement on or into soil if such runoff results in a direct discharge of manure to waters of the U.S.

- Wastewater discharges from retention ponds via a hydrologic connection

- Spills of wastewater due to pipe breakage or equipment failure

3. How to determine if your animal feeding operation is a CAFO?

Review the following questions to determine if your facility is a CAFO.

a) Have you been notified by EPA that your facility is a CAFO? **If yes, your facility is a CAFO.** (The Regulations state that "the Director may designate any animal feeding operation as a CAFO upon determining that it is a significant contributor of pollution to the waters of the United States.") **If no, proceed to question (b).**

b) Do you operate a facility where animals are confined and fed or maintained?
If yes, proceed to question (c). If no, your facility is not a CAFO.

c) Are animals confined and fed or maintained for a total of 45 days or more in any 12 month period?
If yes, proceed to question (d). If no, your facility is not a CAFO.

d) Are any crops, vegetation forage growth, or post-harvest residues sustained in the normal growing season over any portion of the lot or facility?
If no, proceed to question (e). If yes, your facility is not a CAFO.

e) Does your facility confine greater than the following number of animals:

- 700 mature dairy cattle,
- 1000 slaughter or feeder cattle, or
- 1000 animal units (See Part VII.I(a) for details on number and types of animals)?

If yes, proceed to question (f). If no, proceed to question (g).

f) If your facility never discharges or discharges only during a 25-year, 24-hour storm event, it is not a CAFO.

g) Does your facility confine the following number of animals:

- between 200 and 700 mature dairy cattle,
- between 300 and 1000 slaughter or feeder cattle, or
- between 300 and 1000 animal units (See Part VII.I(b) for details on number and types of animals)?

If yes, proceed to question (i). If no, proceed to question (h).

h) If your facility has less than the numbers of animals specified in Question (g) above, have you been notified by EPA, after an inspection, that your facility has been designated a CAFO? (See Part VII.K. of this permit for details on designating a facility as a CAFO).
If yes, your facility is a CAFO.

i) Does your facility discharge directly (or has the potential to discharge directly) into rivers, streams, creeks or other waters of the United States?
If yes, your facility is a CAFO. If no, proceed to question (j).

j) Does your facility discharge (or has the potential to discharge) through a man-made device such as a pipe, ditch, or overflow of irrigated wastewater from land application, into a river, stream, creek or other waters of the United States?
If yes, your facility is a CAFO.

If you answered **YES** to questions (a), (h), (i), **or** (j) above, your facility is a **CAFO**.

See Part VII.I. of this permit for more details on the definition of a CAFO.

C. Eligibility for Coverage

Unless excluded from coverage in accordance with Paragraph D or F below, owners or operators of animal feeding operations that are defined as CAFOs (Part VII.I. of this permit) are eligible for coverage under this permit. Specific coverage requirements for existing, new, and expanding CAFOs are described below:

1. Existing CAFOs

Owners or operators of existing CAFOs are authorized, under the terms and conditions of this permit, and upon the submittal of a permit application (i.e., a Notice of Intent[1] or NOI) to gain coverage under this permit. Permittees must retain, on site, a copy of the permit and the pollution prevention plan (PPP) as required by this permit. A permittee may request to be excluded from coverage under this permit by (1) submitting to EPA and State/Tribe agency a completed notice of termination form (Addendum B), and (2) applying for an individual permit in accordance with Part I.F(2).

2. New CAFOs

Owners or operators of new CAFOs are authorized, under the terms and conditions of this permit and upon the submittal of a permit application (i.e., notice of intent or NOI[1]) to gain coverage under this permit. The owner or operator of a new CAFO with less than 1000 AUs must submit the permit application at least 5 business days prior to any operations. A new CAFO with more than 1000 AUs must submit its NOI at least 45 business days prior to any operations. Permittees must retain, on site, a copy of the permit and the pollution prevention plan (PPP) as required by

[1] The Notice of Intent Form is included in this permit as Addendum A.

this permit. Additional requirements for new CAFOs with more than 1000 animal units (AU)[2] or the number and types of animals specified in Part VII.I(a) of this permit [40 CFR 122 Appendix B(a)] are as follows:

(a) New CAFOs that are subject to the National Effluent Guidelines (40 CFR 412) are new sources and shall, prior to constructing, submit the Environmental Information Document (EID) as specified in Addendum C of this permit. This information must be sent to: EPA Region 6, Office of Coordination and Planning (6EN-XP), U.S. EPA Region 6, 1445 Ross Ave., Suite 1200, Dallas, Texas 75202. A copy of this information should also be sent to the State/Indian Tribe where the CAFO will be located.

(b) New source CAFOs shall have documentation of "No Significant Impact" or a completed Environmental Impact Statement, in accordance with an environmental review conducted by EPA [40 CFR 6.102(a)(6)], as a condition of coverage under this permit. This documentation shall be obtained and retained on site prior to the submittal of the permit application.

3. Expanding CAFOs[2]

Any existing CAFO (with more than the number of animals specified in Part VII(b) of this permit) that intends to expand its operations to more than 1000 animal units or the number and types of animals specified in Part VII.I(a) of this permit [40 CFR 122 Appendix B(a)] must, prior to construction of the expansion, submit to EPA information to enable a new source determination of the proposed expansion, as required by 40 CFR 122.21(i). If the CAFO is determined to be a new source, the CAFO must submit to EPA an Environmental Information Document and permit application (NOI) for the expansion. The information must be submitted to EPA 90 days prior to construction of the expansion.

D. Limitations on Coverage

The following CAFOs are not eligible for coverage under this permit but must seek coverage under an alternative general permit or and individual permit:

1 CAFOs that the Director has determined to be, or may reasonably be expected to be, causing or contributing to a violation of a water quality standard, and which have been notified by the Director to apply for an individual or alternative general permit in accordance with Part I.F. (below) of this permit.

2 Any CAFO which adversely affects a listed or proposed to be listed endangered or threatened species or its critical habitat.

[2] The provisions specified in Parts I.C(2) and (3) are requirements of Federal programs under the National Environmental Policy Act of 1969 and will not apply to such facilities once authority for the NPDES program has been assumed by the State/Tribe agency.

3 Coverage under this permit is available only if:

(a) All CAFO-related activities are in compliance with any applicable Federal, State, Tribal, or local historic preservation laws.

(b) If, at any time during construction activities or during the operation of the CAFO, a permittee becomes aware that historic properties may be present in the Area of Potential Effects which were not identified during the application process, the permittee must contact the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO), or other Tribal representative (see Addendum D) to determine whether additional actions are required to meet the eligibility requirements of Part I.D(3). This may result in the initiation of consultation with the SHPO, THPO, or other Tribal representative and the development or modification of a written agreement and the PPP.

(4) Any new CAFO that will be located within one mile of the Coastal Zone Management Area. Such a CAFO must apply for an individual permit.

(5) Any existing CAFO within one mile of the Coastal Zone Management Area, if such a CAFO is planning to expand to more than 1000 AU. Such a CAFO must apply for an individual permit.

(6) Any existing CAFO located in watershed that are impaired by CAFO-related activities or new CAFOs that will be located in watersheds that have been impaired by CAFO-related activities are not eligible for coverage under this permit. Such CAFOs must seek coverage under the watershed-specific general permit.

E. Application for Coverage

1. Owners or operators of existing CAFOs with coverage under the CAFO general permit that expired on March 10, 1998, must (1) submit a NOI within 360 days of the effective date of this permit, (2) comply with the conditios of the CAFO general permit that expired on March 10, 1998, for the first 360 days from the effective date of this permit, and (3) update their PPPs to comply with the requirements of this permit within 360 days after the effective date of this permit. The applicant must also indicate on the application whether (1) the CAFO is located on Indian Country land with or without an EPA-approved water quality management plan, and (2) a site-specific PPP that is consistent with conditions of this permit has been prepared for the facility.

2. A list of the information required for a complete application can be found in Addendum A of this permit. For new CAFOs with more than 1000 AUs, the application must be submitted at least 45 days prior to any operations. For new facilities with less than 1000 AUs, the application must be submitted at least 5 business days prior to any operations. For existing facilities planning to expand to more than 1000 animal units or the number and types of animals specified in Part VII.I(a) of this permit [40 CFR 122 Appendix B(a)], a new application must be submitted to EPA prior to construction of the expansion. Coverage under this permit requires written notification from EPA that coverage has been granted and that a specific permit number has been assigned to the CAFO.

3. The application shall be signed by the owner or other authorized person in accordance with Part III.H and Part IV.E of this permit.

4. Signed copies of the application shall be sent to:

U.S. EPA Region 6
6WQ-EA CAFO General Permit
P.O. Box 50625
Dallas, Texas 75270

5. A copy of the application must also be sent to the State/Tribal agency where the CAFO is located. The following is a listing of the State/Tribal agencies to which copies of the application should be sent:

NEW MEXICO
Program Manager
Surface Water Quality Bureau
Point Source Regulation Section
New Mexico Environment Depart.
1190 St. Francis Blvd.
P.O. Box 26110
Santa Fe, NM. 87502

TEXAS
TNRCC
Water Quality Div. MC 158
12100 Park 35 Circle
P.O. Box 13087
Austin, TX 78711-3087

OKLAHOMA
State of Oklahoma
Department of Agriculture
2800 N. Lincoln Blvd.
Oklahoma City, OK. 73105-4298

PUEBLO OF ISLETA
Environmental Department
Pueblo of Isleta
P.O. Box 1270
Isleta, NM 87022

PUEBLO OF NAMBE
Dept. of Environment & Natural Resources
Pueblo of Nambe
Route 1, Box 117 BB
Santa Fe, NM 87501

PUEBLO OF PICURIS
Environmental Office
Pueblo of Picuris
P.O. Box 127
Penasco, NM 87533

PUEBLO OF POJOAQUE
Environmental Dept.
Pueblo of Pojoaque
Route 11, Box 71
Santa Fe, NM 87501

PUEBLO OF SANDIA
Environmental Dept.
Pueblo of Sandia
P.O. Box 6008
Bernalillo, NM 87004

PUEBLO OF SAN JUAN
Office of Environmental Affairs
Pueblo of San Juan
P.O. Box 1099
San Juan, NM 87566

PUEBLO OF SANTA CLARA
Dept. of Water Quality and Wetlands
Pueblo of Santa Clara
P.O. Box 580
Espanola, NM 87532

PUEBLO OF TESUQUE
Environmental Department
Pueblo of Tesuque
Route 5, Box 360-T
Santa Fe, NM 87501

F. Requiring an Individual Permit

1. The Director may require any facility authorized by this permit to apply for and obtain either an individual NPDES permit or an alternative NPDES general permit as provided in 40 CFR 122.28(b)(2)(i). The Director will notify the owner or operator, in writing, that a permit application is required. If an owner or operator fails to submit, in a timely manner, an individual NPDES permit application required by the Director, then the applicability of this general permit to the permittee is automatically terminated at the end of the day specified for application submittal.

2. Any owner or operator covered under this permit may request to be excluded from the coverage of this permit by applying for an individual permit as provided in 40 CFR 122.28(b)(2)(iii). The owner or operator shall submit an application for an individual permit (Form 1 and Form 2B) to the Director with reasons supporting the application. When an individual NPDES permit is issued to an owner or operator otherwise subject to this general permit, or the owner or operator is approved for coverage under an alternative NPDES general permit, the applicability of the CAFO general permit to the facility is automatically terminated on the effective date of the individual permit or on the date of approval for coverage under the alternative general permit. When an individual NPDES permit is denied to an owner or operator otherwise subject to this general permit, or the owner or operator is denied coverage under an alternative NPDES general permit, the permittee is automatically reinstated under this CAFO general permit on the date of such denial, unless otherwise specified by the Director.

G. Permit Expiration

This permit will expire five (5) years from the date of reissuance. The conditions of an expired permit will continue to be in force until the effective date of a new permit (40 CFR 122.6).

PART II. PERMIT REQUIREMENTS

A. Effluent Limitations

There shall be no discharge of process wastewater pollutants to waters of the United States except when rainfall events, either chronic or catastrophic, cause an overflow of process wastewater from a control facility properly designed, constructed, maintained, and operated to hold:

a) All process-generated wastewater resulting from the operation of the CAFO (such as wash water, parlor water, watering system overflow, etc.); **plus**,

b) All runoff from a 25-year, 24-hour rainfall event

B. Discharge Prohibitions

The effluent limitations above include but are not limited to, the following discharge prohibitions:

1. Discharge of process wastewaters from control structures such as lagoons and animal confinement and maintenance areas to waters of the United States by means of a hydrologic connection is prohibited.

2. Contaminated run-off or drainage of land applied wastewater from land application areas is prohibited where it will result in a direct discharge of pollutants to waters of the United States.

3. Contaminated run-off from fields on which manure has been land applied is prohibited where it will result in a direct discharge of pollutants to waters of the United States. Manure will not be applied to land when the ground is frozen or saturated or during rainfall.

C. Discharge Monitoring and Notification

If, for any reason, there is a discharge to a water of the United States, the permittee is required to monitor and report the discharge as established in Part III of this permit. Discharge flow and volume from a CAFO retention structure may be estimated if measurement is impracticable.

D. Best Management Practices

All CAFOs covered by this permit are required to implement "Best Management Practices (BMPs)" and procedures which are specifically designed to assure compliance with the "no discharge" limitation specified in this permit. Such BMPs shall be specified in a site-specific Pollution Prevention Plan (PPP) prepared for the facility. There are two types of BMPs that must be implemented by all CAFOs: (1) those BMPs for management and control of waste/wastewater at the animal confinement and maintenance areas of the CAFO, and (2) BMPs for properly disposing of waste/wastewater by land application. The BMP requirements for the (1) confinement and maintenance areas, and (2) land application of waste/wastewater are described in this section:

1. Confinement and Maintenance Areas

The following BMPs shall be utilized by CAFO owners/operators, as appropriate, to (1) minimize waste/wastewater volumes generated from confinement and maintenance areas, (2) manage runoff from these areas, and (3) ensure that control structures for wastewater containment are adequately designed, constructed, operated, and maintained:

a) Wastewater Control and Retention Structures: All wastewater control and retention structures and facilities must be designed, constructed, operated, and maintained to contain all process-generated wastewaters and the contaminated runoff from a 25-year, 24-hour rainfall event for the location of the CAFO. Calculations may also include allowances for surface retention, infiltration, and other site-specific factors. Wastewater control facilities must be constructed, maintained and managed so as to retain all contaminated precipitation runoff from open lots and associated areas, process-generated wastewater, and all other wastes which will enter or be stored in the retention structure.

b) Facility Location: Wastewater control and retention facilities or holding pens for new CAFOs and existing CAFOs that are intending to expand to more than 1000 AUs may not be located in the 100-year flood plain, unless such facilities are protected from inundation and damage that may occur during that flood event.

c) Facility Expansion: CAFOs shall not expand operations, either in size or numbers of animals, prior to amending or enlarging the waste handling procedures and structures to accommodate any additional wastes that will be generated by the expanded operations.

d) Access Restriction: Open lots and associated wastes shall be isolated from outside surface drainage by ditches, dikes, berms, terraces or other such structures designed to carry peak flows expected at times when the 25-year, 24-hour rainfall event occurs. No waters of the U.S. shall come into direct contact with the animals confined on the CAFO. Fences may be used to restrict such access.

e) Protection of Drinking Water: There shall be no water quality impairment to public and neighboring private drinking water wells due to waste handling at the permitted facility. Wastewater retention structures, holding pens or waste/wastewater disposal sites shall not be closer to public or private water wells than the distances specified by State/Tribal regulations or health codes or State/Indian Tribe-issued permits for that facility. Waste handling, treatment, and management shall not create an environmental or a public health hazard; shall not result in the contamination of drinking water; shall conform with State/Tribal guidelines and/or regulations for the protection of surface water quality.

f) Chemical Handling: The operator shall prevent the discharge of pesticide-contaminated waters into retention structures. All wastes from dipping vats, pest and parasite control units, and other facilities utilized for the management of potentially hazardous or toxic chemicals shall be handled and disposed of in a manner such as to prevent pollutants from entering the retention structures.

g. Discharges of Chemicals to Containment Structures: All discharges to containment

structures shall be composed entirely of wastewaters from the proper operation and maintenance of a CAFO and the precipitation runoff from the CAFO areas. The disposal of any materials (other than discharges associated with proper operation and maintenance of the CAFO) into the containment structures is prohibited by this permit.

h) Dead Animals: Dead animals shall be properly disposed of within three (3) days unless other wise provided for by the Director. Animals shall be disposed of in a manner to prevent contamination of surface waters of the U.S. or create a public health hazard.

i) Spills: Appropriate measures necessary to prevent spills and to clean up spills of any toxic and other pollutants shall be taken. If spills are expected to occur, materials handling procedures and storage must be specified in the PPP. Procedures for cleaning up spills shall be identified and the necessary equipment to implement clean up shall be made available to facility personnel. Spills must be reported to EPA and State/Indian Tribe as specified in Part IV.D(3).

2. Onsite Land Application

(a) Waste Management Plan

All CAFOs that dispose of wastes by land application must develop and implement a waste management plan. All wastes, including Solids, sludges, manure, and other pollutants generated at the facility shall be managed and disposed of in accordance with procedures specified in such a site-specific waste management plan. Each waste management plan shall describe the methods for, and account for, the disposal of all manure and wastewater generated by the facility. If the proposed methods of disposal include land application of manure and wastewater, the facility must develop a site-specific nutrient utilization plan.

(b) Nutrient Utilization Plan

The nutrient utilization plan must include the following information:

- A site map showing the proposed land application areas, including the major soil types within the proposed land application areas;
- Crop rotations to be implemented during the permit term;
- Methods and procedures for analyzing nutrients in the land application area soils, manure, and wastewater;
- Predicted yield goals based on the major soil types within the proposed land application areas;
- Procedures for calculating nutrient budgets that must be used to determine waste application rates;

- Equipment to be used in land application of manure and wastewater and the procedures for inspecting and maintaining such equipment;

- Projected rates and timing of application of the manure and wastewater as well as other sources of nutrients that will be applied to the land application areas during the permit term. The permittee must maintain records of the actual rates and dates of application of the manure, wastewater, or other nutrient sources applied to the land application areas throughout the entire permit term. If the manure and wastewater are to be disposed of in areas that are not owned by the facility and are not described in the facility's nutrient utilization plan, the facility must keep records of landowner agreements for the lands that will receive the manure and wastewater and the nutrient contents of the manure and wastewater applied to such lands.

  Existing CAFOs must develop and implement a nutrient utilization plan within one year following reissuance of the CAFO General Permit. New CAFOs must develop and implement a nutrient utilization plan immediately following reissuance of the CAFO General Permit. Designated CAFOs must develop and implement a nutrient utilization plan within two years following designation. Specific requirements for (1) nutrient sampling and analyses, and (2) determining agronomic rates are describe in paragraphs (c) and (d) below.

(c) Nutrient sampling and testing procedures:

Each permittee must conduct analytical tests to determine the nutrient contents of the (1) manure and wastewater generated by the facility, and (2) soils within the land application areas prior to the first land application event at new CAFOs and the first seasonal land application event at existing facilities, then once per quarter thereafter. EPA can increase sampling frequencies when soil phosphorus levels exceed threshold values at a facility, or if there are identified or suspected water quality standard violations. The permittee must then compare the nutrient contents of the manure and wastewater with residual nutrient contents of the land application soils to determine the needed fertility and application rates for pasture production or production of other targeted crop yields. The permittee must maintain records of all nutrient sampling and analyses, calculations, application rates and utilized acreage of the land application area.

(d) Procedures for determining agronomic rates

Manure and wastewater application rates must be based on agronomic crop requirements for nitrogen or phosphorus, as determined from results of nutrient sampling and testing. Application rates should be based on nitrogen until the concentration of phosphorus in the soil increases to the limit specified by State/Tribe in which the CAFO is located. For example, the State of Texas has established a soil phosphorus concentration limit of 200 mg/kg. If the concentration of phosphorus in the soil reaches 200 mg/kg, the permittee must switch from a nitrogen-based manure application rate to a phosphorus-based rate to minimize risks of water quality impairment due to phosphorus. The state of Oklahoma uses a threshold soil phosphorus concentration limit of 300 pounds per acre. This limit was recommended by the USDA-NRCS. When the soil phosphorus concentration exceeds

this limit, manure must be applied at rates based on the phosphorus needs of the crops being produced.

The CAFO operator must use the approach outlined below for determining agronomic rates of waste/waste application:

- Apply manure and wastewater at rates based on the agronomic crop needs of nitrogen if soil tests demonstrate that the surface soil (0 to 6 inch-depth) phosphorus concentration is or will be consistently below the State/Tribe threshold soil phosphorus level during the permit term. If the State/Tribe has not established such a soil phosphorus concentration threshold level, apply manure/wastewater based on nitrogen requirements of the crops being produced.

- Apply manure and wastewater at rates based on the agronomic crop needs of phosphorus if soil tests demonstrate that the surface soil phosphorus concentration exceeds the threshold phosphorus level established by the State/Tribe where the CAFO is located.

- If soil tests indicate that the phosphorus threshold level will be exceeded during the permit term, the permittee should begin to seek access to additional cropland or make other adjustments that are necessary to comply with the State/Tribe phosphorus limit.

3. Offsite Land Application

Offsite land application of manure is not regulated. However, whenever CAFO-generated manure is to be sold or given away for offsite disposal by land application at agronomic rates, the CAFO operator must provide current and accurate manure testing data that can be used by the offsite applicator to establish agronomic rates of manure application. The CAFO operator must provide counsel and advice to the offsite applicator concerning the requirements for applying the manure based on agronomic rates. The offsite land applicator must use voluntary measures recommended by the State/Tribe or the USDA-NRCS to minimize water quality problems resulting from land application of manure at rates that exceed agronomic rates. The CAFO operator should obtain, from the offsite applicator, information concerning location and acreages of the proposed offsite land application areas. The CAFO operator must keep all records, including the information provided by the offsite applicator, quantities of the manure sold/given away, and dates of sale. However, incidental amounts given to individuals by the pickup load need not be recorded. All records must be kept at the facility. The CAFO operator must provide these records to the Director whenever requested.

4. Pollution Prevention Plan Requirements

A site-specific PPP that includes a manure management plan and a nutrient utilization plan where land application is the proposed option shall be developed by each CAFO covered under this permit. The PPP must be made available to the Director upon request. PPPs shall be prepared in accordance with good engineering practices and should include

measures necessary to limit pollutants in runoff. Each PPP shall include practices which are to be used to assure compliance with the limitations and conditions of this permit. The PPP shall identify a specific individual(s) at the facility that are responsible for developing, implementing, and revising the PPP. The activities and responsibilities of the pollution prevention personnel must be described in the facility's PPP. Other issues that must be addressed in the PPP include the following:

a) NRCS Waste Management Plans: Where a NRCS waste management plan[3] has been prepared for the CAFO, the PPP may refer to the NRCS plan when the NRCS plan contains equivalent requirements for the facility. When the permittee uses a NRCS plan, the NRCS plan must be kept on site. Design and construction criteria developed by the NRCS are considered to be adequate for ensuring the protection of water quality.

b) When to Implement the PPP: Unless otherwise directed by the permitting authority, large CAFOs [those with 1000 (AU) or more] shall have, on site, and must implement a PPP or its equivalent following reissuance of this general permit. Medium-size CAFOs (those with less than 1000 AU but with 300 or more AU) shall have, on site, and must implement a PPP or its equivalent following reissuance of this permit. Small CAFOs (with less than 300 AU) that have been designated by the Director as CAFOs) shall have, on site, and must implement a PPP or its equivalent within one year following designation by the Director. New CAFOs shall have, on site, a PPP or its equivalent prior to the submission of the permit application (NOI) for coverage under this permit.

c) Signatory Requirements: The PPP shall be signed by the owner or other signatory authority in accordance with Part III.H (Signatory Requirements), and be retained on site in accordance with Part III.D (Retention of Records) of this permit. The plan shall be updated as appropriate.

d) If the PPP is reviewed by the Director or authorized representative, the Director or authorized representative may notify the permittee, at any time, that the PPP does not meet one or more of the minimum requirements of this Part. After such notification from the Director or authorized representative, the permittee shall make changes to the PPP within 90 days after such notification unless otherwise provided by the Director.

e) Amendment of the PPP: The permittee shall amend the PPP prior to any change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to the waters of the United States or if the PPP proves to be ineffective in achieving the general objectives of controlling

[3] USDA-NRCS Waste Management Plans which have been prepared since January 1, 1989 are considered by the NRCS to contain adequate waste management practices. However, to insure the protection of water quality, the NRCS has determined that these plans should be reviewed every five (5) years to insure proper management of wastes.

pollutants in the discharges from the CAFO.
Amendments to the PPP may be reviewed by the Director or authorized representative.

f) Requirements of the PPP: The PPP shall include, at a minimum, the requirements specified in Part VI.

E. Other Legal Requirements

No condition of this permit shall release the permittee from any responsibility or requirements under other statutes or regulations, Federal, State/Indian Tribe or Local.

PART III. DISCHARGE MONITORING AND NOTIFICATION REQUIREMENTS

A. Discharge Notification

If, for any reason, there is a discharge to a water of the U.S., the permittee is required to make immediate verbal notification to EPA at (214) 665-6595, and to notify the Director and the State/Tribe in writing within 14 working days of the discharge from the facility. In addition, the permittee shall keep a copy of the notification submitted to the Director and the State/Tribe together with the PPP. The discharge notification shall include the following information:

1. Description of the discharge: A description and cause of the discharge, including a description of the flow path to the receiving water body. Also, an estimation of the flow and volume discharged.

2. Time of the discharge: The period of discharge, including exact dates and times, and, if not corrected, the anticipated time the discharge is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the discharge.

3. Cause of the discharge: If caused by a precipitation event(s), information from the onsite rain gauge concerning the size of the precipitation event.

4. Analysis of the discharge: All discharges shall be sampled and analyzed. Samples must, at a minimum, be analyzed for the following parameters: Fecal Coliform bacteria; 5-day Biochemical Oxygen Demand (BOD5); Total Suspended Solids (TSS); nitrogen (as ammonia); and any pesticides which the operator has reason to believe could be in the discharge. Analytical data shall be kept together with the PPP.

5. Sampling procedures: Samples shall consist of grab samples collected from the over-flow or discharges from the retention structure. A minimum of one sample shall be collected from the initial discharge (within 30 minutes). The sample shall be collected and analyzed in accordance with EPA approved methods for water analysis listed in 40 CFR 136. Samples collected for the purpose of monitoring shall be representative of the monitored discharge.

6. Reasons for not sampling: If conditions are not suitable for sampling, the permittee must

provide documentation of why samples could not be collected. For example, the discharger may be unable to collect samples during dangerous weather conditions (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.). However, once dangerous conditions have passed, the permittee shall collect a sample from the retention structure (pond or lagoon).

B. Written Request for Notification

All discharge information and data will be made available to the Director upon request. Signed copies of monitoring reports shall be submitted to the Director if requested at the address specified in the request.

C. Penalties for Falsification of Reports

The Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both.

D. Retention of Records

The permittee shall retain copies of all records required by this permit for a period of at least three years from the date reported. This period may be extended by request of the Director at any time.

E. Availability of Reports

In addition to data determined to be confidential under 40 CFR Part 2, information submitted to EPA may be claimed as confidential by the submitter. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. As required by the Act, however, effluent monitoring data shall not be considered to be confidential and any claims of confidentiality for this information will be denied.

F. Duty to Provide Information

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

G. Other Information

When the permittee becomes aware that he failed to submit any relevant facts or submitted incorrect information to the Director, he shall promptly submit such facts or information.

H. Signatory Requirements

All discharge monitoring data, reports, or information submitted to the Director shall be signed and

certified as described below:

1. All reports or information shall be signed by the facility owner or operator/manager where the authority to sign documents has been assigned or delegated to the operator/manager. The following officials are authorized to sign and to certify reports and information submitted to EPA.

    a) For facilities owned by a corporation: by a responsible corporate officer. For the purpose of this permit, a responsible corporate officer means (i) a president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy-or decision-making functions for the corporation.

    b) For a facilities owned by a partnership or sole proprietorship: by a general partner or the proprietor, respectively.

    c) For facilities owned by a municipality, State/Indian Tribe, Federal, or other public agency: by either a principal executive officer or ranking elected official.

2. All reports required by the permit and other information requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if the authorization is made in writing by a person described above, and the authorization specifies either an individual or a position having responsibility for the overall operation.

3. Certification. Any person signing a document under this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

PART IV. STANDARD PERMIT CONDITIONS

A. General Conditions

1. Introduction: In accordance with the provisions of 40 CFR Part 122.41, et. seq., this permit incorporates by reference ALL conditions and requirements applicable to NPDES Permits set forth in the Clean Water Act, as amended, (hereinafter known as the "Act") as well as ALL applicable regulations.

2. Duty to Comply: The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action, for terminating coverage under this permit, or for requiring a permittee to apply for and obtain an individual NPDES permit.

3. Toxic pollutants: The permittee shall comply with effluent standards and prohibitions established under section 307(a) of the Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

4. Permit flexibility: This permit may be modified, revoked and reissued, or terminated for cause in accordance with 40 CFR 122.62-64 and 40 CFR 122.44 (d). The filing of a request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

5. Property rights: The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State/Tribal or local laws or regulations.

6. Duty to provide information: The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

7. Criminal and Civil Liability: Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Any false or materially misleading representation or concealment of information required to be reported by the provisions of the permit, the Act, or applicable regulations, which avoids or effectively defeats the regulatory purpose of the Permit may subject the Permittee to criminal enforcement pursuant to 18 U.S.C. Section 1001.

8. State/Tribal Laws: Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State/Tribal law or regulation under authority preserved by section 510 of the Act.

9. Severability: The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

B. Proper Operation and Maintenance

1. Need to halt or reduce not a defence: It shall not be a defense for a permittee in an enforcement action to plead that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

2. Duty to mitigate: The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

3. Proper operation and maintenance: The permittee shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

   The permittee shall provide an adequate operating staff which is duly qualified to carry out operation, maintenance and testing functions required to insure compliance with the conditions of this permit.

C. Monitoring and Records

1. Inspection and entry: The permittee shall allow the Director, or an authorized representative of EPA, including the State/Indian Tribe, upon the presentation of credentials and other documents as may be required by law, to:

   a) Enter the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

   b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

   c) Inspect, at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit, and

   d) Sample or monitor, at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the Act, any substances or parameters at any location.

2. Representative sampling: Samples and measurements taken for the purpose of monitoring

shall be representative of the monitored activity.

3. Retention of records: The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report, or application. This period may be extended by request of the Director at any time.

4. Record content: Records of monitoring information shall include:

   a. The date, exact place, and time of sampling or measurements;
   b. The individual(s) who performed the sampling or measurements;
   c. The date(s) and time(s) analyses were performed;
   d. The individual(s) who performed the analyses;
   e. The analytical techniques or methods used; and
   f. The results of such analyses.

5. Monitoring procedures:

   a. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit or approved by the Regional Administrator.

   b. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instruments at intervals frequent enough to insure accuracy of measurements and shall maintain appropriate records of such activities.

   c. An adequate analytical quality control program, including the analyses of sufficient standards, spikes, and duplicate samples to insure the accuracy of all required analytical results shall be maintained by the permittee or designated commercial laboratory.

D. Reporting Requirements

1. Anticipated Noncompliance: The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

2. Transfers: Coverage under these permits is not transferable to any person except after notice to the Director.

3. Twenty-four hour reporting: The permittee shall make a telephone report to EPA and State/Indian Tribe within 24 hours if any noncompliance which may endanger human health or the environment occurs. Such information shall be provided orally to the State/Indian Tribe and EPA Region 6, via EPA's 24-hour voice mail system, telephone

number 214-665-6593, within 24 hours from the time the permittee becomes aware of the noncompliance circumstances. A written submission shall be provided to EPA and the State/Indian Tribe within 5 days of the time the permittee becomes aware of the circumstances. The report shall contain the following information:

a) A description of the noncompliance and its cause;

b) The period of noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and,

c) Steps being taken to reduce, eliminate, and prevent recurrence of the noncomplying circumstances or discharges.

4. Other information: Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

E. Signatory requirements

All applications, reports, or information submitted to the Director shall be signed and certified.

1. **All permit applications** shall be signed as follows:

a) By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation; or, ii) For a corporation - The manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

b) By a general partner for a partnership or the proprietor for sole proprietorship.

2. **All reports** required by the permit and other information requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a) The authorization is made in writing by a person described above;

   b) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. A duly authorized representative may thus be either a named individual or an individual occupying a named position; and,

   c) The written authorization is submitted to the Director.

F. Certification

Any person signing a document under this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

G. Availability of Reports

Any information submitted pursuant to this permit may be claimed as confidential by the submitter. If no claim is made at the time of submission, information may be made available to the public without further notice.

H. Penalties for Violations of Permit Conditions

1. **Criminal Penalties**

   a) Negligent violations: The Act provides that any person who negligently violates permit conditions implementing Section 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than 1 year, or both.

   b) Knowing violations: The Act provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than $5,000 nor more than $50,000 per day

of violation, or by imprisonment for not more than 3 years, or both.

c) Knowing endangerment: The Act provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 303, 306, 307, 308, 318, or 405 of the Act and who knows at that time that he is placing another person in imminent danger of death or serious bodily injury is subject to a fine of not more than $250,000, or by imprisonment for not more than 15 years, or both.

d) False statements: The Act provides that any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the Act or who knowingly falsifies, tampers with, or renders inaccurate, any monitoring device or method required to be maintained under the Act, shall upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or by both. (See Section 309.c.4 of the Clean Water Act)

2. **Civil penalties**

The Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed $27,500 per day for each violation.

3. **Administrative penalties**

The Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to an administrative penalty, as follows:

a) Class I penalty: Not to exceed $11,000 per violation nor shall the maximum amount exceed $27,500.

b) Class II penalty: Not to exceed $11,000 per day for each day during which the violation continues nor shall the maximum amount exceed $137,000.

PART V. REOPENER CLAUSE

1. If effluent limitations or guidelines are established or modified in an approved State/Tribe Water Quality Management Plan or Waste Load Allocation and if they are more stringent than those listed in this permit or control a pollutant not listed in this permit, this permit may be reopened to include those more stringent limits or requirements.

2. When and if a total daily maximum load (TDML) is developed to address pollution from

CAFOs in a particular watershed, permittees in that watershed may be required to obtain individual permits or to obtain coverage under an alternative general permit or the permit may be modified to include different limitations and/or requirements.

3. If and when a particular watershed is identified by the State/Tribe as having been impaired by CAFO-related activities, permittees in that watershed may be required to obtain individual permits or to obtain coverage under an alternative general permit or the permit may be modified to include different limitations and/or requirements.

4. Permit modification or revocation will be conducted according to 40 CFR 122.62, 122.63, and 122.64.

PART VI. POLLUTION PREVENTION PLAN (PPP) REQUIREMENTS

The PPP shall include, at a minimum, the following information:

A. Description of Potential Pollutant Sources

Each plan shall provide a description of potential sources which may reasonably be expected to add pollutants to runoff from the facility. Each plan shall identify activities and materials which may potentially be pollutant sources. Each plan shall include:

1. A site map, or topographic map showing the drainage pattern of the concentrated animal feeding area and arrows indicating the direction of surface water from the facility; each existing structural control measure to reduce pollutants in wastewater and precipitation runoff; and surface water bodies.

2. A list of significant materials that are used, stored or disposed of at the CAFO (such as pesticides, cleaning agents, fuels etc.) and a description of any significant spills of these materials at the facility after the issuance date of this permit, or for new facilities, since the date of operation.

3. All existing baseline sampling data.

B. Waste Management Controls

The PPP for each CAFO shall include a description of management controls appropriate for the facility, and the permittee must implement such controls. The appropriateness and priorities of any controls shall reflect the identified sources of pollutants at the facility. Specifically, the plan must include:

1. A description of the location and existing structural and non-structural controls. Structural controls shall be inspected at least four times per year for structural integrity and maintenance. The plan shall include dates for inspection of the retention facility, and a log of the findings of such inspections.

2. Documentation of existing retention facility capacity and the assumptions and

calculations used in determining the appropriate volume capacity. The retention capacity shall be based upon the 25-year, 24-hour rainfall event and the facility design should include a top freeboard of two feet and in no case less than one foot. Retention capacity shall be based upon the following factors:

a) Volume of the runoff from open lot surfaces plus

b) Volume of the runoff from areas between open lot surfaces and the retention facilities plus

c) The rainfall multiplied by the area of the retention facility and wastes basin plus

d) The volume of rainfall from any roofed area that is directed into the retention facilities plus

e) All waste and process-generated wastewater produced during a period of time not less than 21 days or the amount specified in the State/Indian Tribe Water Quality Management Plan, including: (1) volume of wet manure that will enter pond plus; (2) volume of water used for manure/waste removal plus; (3) volume of cleanup/washwater plus; (4) other water such as drinking water that enters the retention facilities.

Where appropriate, site specific information should be used to determine retention capacity and land application rates. All site-specific information used must be documented in the PPP.

3. A description of the design standards for the retention facility embankments. The following minimum design standards are required for construction and/or modification of a retention facility: Soils used in the embankment shall be free of foreign material such as trash, brush, and fallen trees. The embankment shall be constructed in lifts or layers no more than six inches thick and compacted at optimum moisture content. Site-specific variation in embankment construction must be accompanied by compaction testing, certification by a Professional Engineer, or be in accordance with NRCS standards. Compaction tests must be certified by a Professional Engineer. All embankment walls shall be stabilized to prevent erosion or deterioration.

4. A general description of the procedures for liquid waste removal. A date log indicating weekly inspection of wastewater level in retention facility, including specific measurement of wastewater level must be kept together with the plan. Retention facilities shall be equipped with either irrigation or evaporation or liquid removal systems capable of dewatering the retention facilities. Operators using pits, ponds, or lagoons for storage and treatment of storm water, manure and process-generated wastewater, including flush water waste handling systems, shall maintain, in their wastewater retention facility, sufficient capacity to contain rainfall and rainfall runoff from a 25-year, 24-hour rainfall event. The operator

shall restore capacity for a 25-year, 24-hour rainfall event after any rainfall event or accumulation of wastes or process-generated wastewater which reduces such freeboard, weather permitting. Equipment capable of dewatering the wastewater retention structures of waste and/or wastewater shall be available, whenever needed, to restore the capacity required to accommodate the rainfall and runoff resulting from the 25-year, 24-Hour rainfall event.

5. Methods by which the volume of wastewater removed from the retention structure is estimated. A permanent marker (measuring device) shall be maintained in the wastewater retention structure to show the (1) volume required for storage of runoff from a 25-year, 24-hour catastrophic or chronic rainfall event, and (2) the minimum treatment volume level in the retention structure. The marker shall be visible from the top of the levee. The facility shall maintain a record of the wastewater level as part of the management procedures for the retention structure.

6. Procedures for measuring rainfall: A rain gauge shall be kept on site and properly maintained. A log of all measurable rainfall events shall be kept with the PPP.

7. Construction specifications: CAFOs constructing a new or modifying an existing wastewater retention facility shall insure that all construction and design procedures are in accordance with good engineering practices. Where site-specific variations are warranted, the permittee must document these variations and their appropriateness to the plan. Existing structures which have been properly maintained and show no signs of structural breakage will be considered to be properly constructed. Structures built in accordance with site-specific NRCS plans and specifications will be considered to be in compliance with the design and capacity requirements of this permit if the site-specific conditions are the same as those used by the NRCS to develop the plan (numbers of animals, runoff area, wastes generated, etc.). All retention structure design and construction shall, at a minimum, be in accordance with the technical standards developed by the USDA-NRCS. The permittee must use those standards that are current at the time of construction.

8. Liner Requirement: The permittee shall include in the plan, site specific documentation that no significant hydrologic connection exists between the contained wastewater and surface waters of the United States. Where the permittee cannot document that no significant hydrologic connection through ground water exists, the ponds, lagoons and basins of the retention must have a liner which will prevent the potential contamination of surface waters. The PPP must address the following liner requirements:

    a) Documentation of No Liner Requirement. The permittee can document lack of hydrologic connection by either: (1) documenting that there will be no significant leakage from the retention structure; or (2) documenting that any leakage from the retention structure would not migrate to surface waters. This documentation should be certified by a qualified groundwater scientist and must include information on the hydraulic

conductivity and thickness of the natural soil materials underlying and forming the walls of the containment structure, up to the wetted perimeter.

For documentation of no significant leakage, in-situ soil materials must, at a minimum, meet the minimum criteria for hydraulic conductivity and thickness described below. Documentation that leakage will not migrate to a surface water must include maps showing ground water flow paths, or that the leakage enters a confined aquifer environment. A written determination by a NRCS engineer or qualified groundwater scientist that a liner is not needed to prevent leakage of significant amounts of pollutants into surface waters via perched or ground waters will be considered sufficient documentation that no significant hydrologic connection exists.

b) Liner Construction. Site-specific conditions should be considered while designing and constructing liners for retention structures. NRCS liner requirements or liners constructed and maintained in accordance with NRCS design specifications in Technical Note 716 (or its current equivalent) shall be considered to be adequate in preventing hydrologic connection which could result in the contamination of surface waters. Liners for retention structures must be constructed in accordance with good engineering practices. Where no site-specific assessment has been done by the NRCS or a qualified groundwater scientist, the liner shall be constructed to have hydraulic conductivities no greater than 1×10^{-7} cm/sec, with a thickness of 1.5 feet or greater or its equivalency in other materials.

c) Liner Maintenance. Where a liner is installed to prevent hydrologic connection, the permittee must maintain the liner to inhibit infiltration of wastewaters. Liners shall be protected from (1) animals by fences or other protective devices, and (2) tree roots. No trees shall be allowed to grow near the retention structure. Any mechanical or structural damage to the liner will be evaluated by a NRCS engineer or a qualified groundwater scientist within 30 days of the damage. Documentation of liner maintenance shall be kept together with the PPP. The permittee shall have a NRCS engineer or a qualified groundwater scientist review the documentation and do a site evaluation every five years. If notified by the State/Indian Tribe or the Director that the potential exists for the contamination of surface waters or drinking water, the permittee shall install a leak detection system or monitoring wells in accordance with that notice. Documentation of compliance with the notification must be kept with the PPP, as well as all sampling data. Data from the monitoring wells must be kept on site for three years with the pollution prevention plan. The first year's sampling shall be considered the baseline data and must be retained on site for the life of the facility.

9. Wastewater Removal and Land Application. Retention facilities shall be equipped

with either irrigation or evaporation systems capable of dewatering the retention facilities, or a regular schedule of wastewater removal by contract hauler. The PPP must include all calculations, as well as, all factors used in determining land application rates, acreage, and crops. Land application rates must take into account the nutrient contribution of any land applied manures. If land application is utilized for disposal of wastewater, the following requirements shall apply:

a) The discharge or drainage of irrigated wastewater is prohibited where it will result in a discharge to a water of the U.S.

b) If the wastewater is land applied to crop land, application rates shall not exceed the nutrient uptake of the crops being produced. Land application rates of wastewaters shall be based on the available nitrogen or phosphorus contents. However, where local water quality is threatened by phosphorus or if the land application soil phosphorus threshold level has been reached, the permittee should limit the application rate to the recommended rates of available phosphorus for needed crop uptake. The applicant must also provide controls for runoff and erosion as appropriate for site conditions.

c) Wastewater shall not be applied to field by irrigation during periods when the ground is frozen or saturated or during rainfall events (unless used to filter wastewaters from retention structures which are going to overflow directly to a water of the U.S.).

d) Irrigation practices shall be managed so as to reduce or minimize ponding or puddling of wastewater on the site, contamination of ground or surface water, and the occurrence of nuisance conditions such as odors and flies.

e) It shall be considered "Proper Operation and Maintenance" for a facility which has been properly operated, and that is in danger of imminent overflow due to chronic or catastrophic rainfall, to discharge wastewaters to land application sites for filtering prior to discharging to waters of the U.S.

f) Facilities, including ponds, pipes, ditches, pumps, diversion and irrigation equipment shall be maintained to insure ability to fully comply with the terms of this permit and the PPP.

g) Adequate equipment or land application area shall be available for removal of such waste and wastewater as required to maintain the retention capacity of the facility for compliance with this permit.

h) Disposal of wastewaters shall not cause or contribute to the taking of any endangered or threatened species of plant, fish, or wildlife; nor shall such disposal interfere with or cause harm to migratory birds. The operator shall notify the appropriate fish and wildlife agency in the event of any

significant fish, wildlife, or migratory bird/endangered species kill or die-off on or near retention ponds or in fields where waste has been applied, and which could reasonably have resulted from waste management at the facility.

10. Procedures for manure and pond solids handling and land application: Storage and land application of manure shall not cause a discharge of significant pollutants to waters of the United States or cause a water quality violation in waters of the United States. At all times, sufficient volume shall be maintained within the control facility to accommodate manure, other solids, wastewaters and rain waters (runoff) from the concentrated animal feeding areas. Specifically, the PPP must discuss the following:

    a) Land application procedures. Where the permittee decides to land apply manures and pond solids, the plan shall include: (1) a description of waste handling procedures and equipment availability; (2) the calculations and assumptions used for determining land application rates; and (3) any nutrient analysis data. Land application rates of wastes should be based on the available nitrogen content of the solid waste. However, where local water quality is threatened by phosphorus, the application rate should be limited to the recommended rates of available phosphorus for needed crop uptake. The permittee must implement controls to minimize runoff and erosion as appropriate for the site conditions.

    b) Information on waste removal. If the waste (manure) is sold or given to other persons for disposal, the permittee must maintain a log of: date of removal from the feedlot; name of hauler; and amount, in wet tons, dry tons or cubic yards, of waste removed from the feedlot. (Incidental amounts, given away by the pick-up truck load, need not be recorded.) Where the wastes are to be land applied by the hauler, the permittee must make available to the hauler any nutrient sample analysis from that year.

    c) Waste handling and disposal. The procedures documented in the PPP must ensure that the handling and disposal of wastes comply with the following requirements:

        - Adequate manure storage capacity based upon manure and waste production and land availability shall be provided. Storage and/or surface disposal of manure in the l00-year flood plain or near water courses is prohibited. The land application of wastes at agronomic rates shall not be considered surface disposal in this case and is not prohibited.
        - Runoff from manure storage piles must be retained on site.
        - Waste shall not be applied to land when the ground is frozen or saturated or during rainfall events.

- Waste manure shall be applied to suitable land at appropriate times and rates. Discharge (run-off) of waste from the application site is prohibited. Timing and rate of applications shall be in accordance with crop needs, expected precipitation, and soil conditions.

- Disposal of manure shall not cause or contribute to the taking of any endangered or threatened species of plant, fish, or wildlife; nor shall such disposal interfere with or cause harm to migratory birds. The operator shall notify the appropriate fish and wildlife agency in the event of a fish, wildlife, or migratory bird/endangered species kill or die-off on or near retention ponds or in fields where waste has been applied.

- All necessary practices to minimize waste manure transport to watercourses shall be utilized and documented in the plan.

- Edge-of-field grassed strips shall be used to separate water courses from runoff carrying eroded soil and manure particles. Land subject to excessive erosion shall be avoided.

C. Preventative Maintenance

The plan shall include an appropriate schedule for preventative maintenance. Operators will provide routine maintenance to their control facilities in accordance with a schedule and plan of operation to ensure compliance with this permit. The permittee shall keep a maintenance log documenting that preventative maintenance was done. A preventive maintenance program shall involve inspection and maintenance of all runoff management devices (cleaning separators, catch basins) as well as inspecting and testing facility equipment and containment structures to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters.

D. Sediment and Erosion Prevention

The plan shall identify areas which, due to topography, activities, or other factors, have a potential for soil erosion. Where these areas have the potential to contribute pollutants to waters of the U.S. the PPP shall identify measures to be used to limit erosion and pollutant runoff.

E. Employee Training

Where employees are responsible for work activities which relate to permit compliance, those employees must be regularly trained or informed of any information pertinent to the proper operation and maintenance of the facility and waste disposal. Employee training shall inform personnel at all levels of responsibility of the general components and goals of the pollution prevention plan. Training shall include topics as appropriate such as land application of wastes, proper operation and maintenance of the facility, good housekeeping and material management practices, necessary recordkeeping requirements, and spill response and clean up. The permittee is responsible for determining the appropriate training frequency for different levels of personnel and the PPP shall identify periodic dates for such training.

F. Inspections and Recordkeeping

The operator or the person named in the PPP as the individual responsible for drafting and implementing the plan shall be responsible for inspections and recordkeeping. Inspection and recordkeeping activities will be conducted as follows:

1. Recordkeeping and Internal Reporting Procedures. Incidents such as spills, or other discharges, along with other information describing the pollution potential and quantity of the discharge shall be included in the records. Inspections and maintenance activities shall be documented and recorded. These records must be kept on site for a minimum of three years.

2. Visual Inspections. The authorized person shall inspect designated equipment and facility areas. Material handling areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. A follow-up procedure shall be used to ensure that appropriate action has been taken in response to the inspection.

3. Site Inspection. A complete inspection of the facility shall be done and a report made documenting the findings of the inspection made at least once/year. The inspection shall be conducted by the authorized person named in the PPP, to verify that the description of potential pollutant sources is accurate; the drainage map has been updated or otherwise modified to reflect current conditions; and the controls outlined in the PPP to reduce pollutants are being implemented and are adequate. Records documenting significant observation made during the site inspection shall be retained as part of the PPP. Records of inspections shall be maintained for a period of three years.

PART VII. DEFINITIONS

A. 25-Year 24-Hour Rainfall Event means the maximum 24-hour precipitation event with a probable recurrence interval of once in 25 years, as defined by the National Weather Service in Technical Paper Number 40, "Rainfall Frequency Atlas of the United States", May 1961, and

subsequent amendments, or equivalent regional or state rainfall probability information developed therefrom. The term "chronic or catastrophic" shall mean a rainfall event which would not provide opportunity for dewatering and which would be equivalent to or greater than the 25-year, 24-hour storm event. Catastrophic conditions could include tornadoes, hurricanes, or other catastrophic conditions which could cause an overflow from the retention structure due to high winds or mechanical damage. A "chronic" rainfall event is a series of wet weather conditions that preclude dewatering of properly maintained waste retention structures.

B. Agronomic Rates means the land application of animal wastes at rates of application which provide the crop or forage growth with needed nutrients for optimum health and growth.

C. Animal feeding operation means a lot or facility (other than an aquatic animal production facility) where animals have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period, and the animal confinement areas do not sustain crops, vegetation, forage growth, or post-harvest residues in the normal growing season. Two or more animal feeding operations under common ownership are a single animal feeding operation if they adjoin each other, or if they use a common area or system for the disposal of wastes.

D. Animal unit means a unit of measurement for any animal feeding operation calculated by adding the following numbers: The number of slaughter and feeder cattle and dairy heifers multiplied by 1.0, plus the number of mature dairy cattle multiplied by 1.4, plus the number of swine weighing over 55 pounds multiplied by 0.4, plus the number of sheep multiplied by 0.1, plus the number of horses multiplied by 2.0. 1000 animal units will refer to definition VII.I(a). 300 animal units (but less than 1000) will refer to definition number VII.I(b).

E. Application means a written "notice of intent" pursuant to 40 CFR 122.28.

F. Best Available Technology ("BAT") means the best available technology which is economically achievable established under 301(b) and 402 of the Act. The criteria and standards for imposing technology-based treatment requirements are listed in 40 CFR 125.3.

G. Best Conventional Technology ("BCT") means the best conventional pollutant control technology which is economically achievable established under 301(b) and 402 of the Act. The criteria and standards for imposing technology-based treatment requirements are listed in 40 CFR 125.3.

H. Best Management Practices ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of "waters of the United States". Best Management Practices also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

I. Concentrated Animal Feeding Operation (CAFO) means an "animal feeding operation" which meets the criteria in 40 CFR Part 122, Appendix B, or which the Director designates as a significant contributor of pollution pursuant to 40 CFR 122.23. Animal feeding operations defined as "concentrated" in 40 CFR 122 Appendix B are as follows:

a. New and existing operations which stable or confine and feed or maintain for a total of 45 days or more in any 12-month period more than the numbers of animals specified in any of the following categories:

1. 1,000 slaughter or feeder cattle;
2. 700 mature dairy cattle (whether milkers or dry cows);
3. 2,500 swine weighing over 55 pounds;
4. 500 horses;
5. 10,000 sheep or lambs;
6. 55,000 turkeys;
7. 100,000 laying hens or broilers when the facility has unlimited continuous flow watering systems;
8. 30,000 laying hens or broilers when facility has liquid manure handling system;
9. 5,000 ducks; or
10. 1,000 animal units from a combination of slaughter steers and heifers, mature dairy cattle, swine over 55 pounds and sheep;

b. New and existing operations which discharge pollutants into navigable waters either through a man-made ditch, flushing system, or other similar man-made device, or directly into waters of the United States, and which stable or confine and feed or maintain for a total of 45 days or more in any 12-month period more than the numbers or types of animals in the following categories:

1. 300 slaughter or feeder cattle;
2. 200 mature dairy cattle (whether milkers or dry cows);
3. 750 swine weighing over 55 pounds;
4. 150 horses;
5. 3000 sheep or lambs;
6. 16,000 turkeys;
7. 30,000 laying hens or broilers when the facility has unlimited continuous flow watering systems;
8. 9000 laying hens or broilers when facility has liquid manure handling system;
9. 1,500 ducks; or
10. 300 animal units (from a combination of slaughter steers and heifers, mature dairy cattle, swine over 55 pounds and sheep).

Provided, however, that no animal feeding operation is a concentrated animal feeding operation as defined above if such animal feeding operation discharges only in the event of a 25-year, 24-hour storm event.

J. Control Facility means any system used for the retention of all wastes on the premises until their ultimate disposal. This includes the retention of manure, liquid waste, and runoff from the feedlot area.

K. Designation of a Facility as a CAFO means that the Director has determined that a particular facility, which is not a CAFO by definition, is a "Significant Contributor of Pollutants (SCP)", and, therefore, should be regulated as a CAFO. The following factors are considered when making an SCP determination:

1 The size of the animal feeding operation and the amount of wastes reaching waters of the United States,

2 The location of the animal feeding operation relative to waters of the United States,

3 The means of conveyance of animal wastes and process wastewater to waters of the United States,

4 The slope, vegetation, rainfall, and other factors affecting the likelihood or frequency of discharge of animal wastes and process wastewater into waters of the United States, and

5 Other relevant factors.

L. Environmental Review means the process whereby an evaluation of the environmental information provided by the permit applicant is undertaken, by EPA, to identify and evaluate the related environmental impacts to determine if there will be a significant impact to the environment from the new facility [40 CFR 6.101(c)].

M. Feedlot means a concentrated, confined animal or poultry growing operation for meat, milk, or egg production, or stabling, in pens or houses wherein the animals or poultry are fed at the place of confinement and crop or forage growth or production is not sustained in the area of confinement, and is subject to 40 CFR 412.

N. Ground Water means any subsurface waters.

O. Hydrologic Connection means the interflow and exchange between surface impoundments and surface water through an underground corridor or ground water. In the context of this permit, the reduction of hydrologic connection is to reduce the ground water flow contact resulting in the transfer of pollutant materials from CAFO containment structures into surface waters.

P. Land Application means the removal of wastewater and waste solids from a control facility and distribution to, or incorporation into the soil mantle primarily for disposal purposes.

Q. Liner means any barrier in the form of a layer, membrane or blanket, installed to prevent a significant hydrologic connection between liquids contained in retention structures and waters of the U.S.

R. Nutrient Budgeting involves an evaluation of plant nutrient flows to, from, and within a CAFO or a portion of a CAFO, such as a manure/wastewater land application area. For example, budgeting is needed to ensure that nutrients are applied to the land application area at rates that do

not exceed plant requirements. A nutrient budget should account for the nutrients added to the land application area as commercial fertilizer, nutrients removed from the land application area in the harvastable portins of the crops, and residual quantities of nutrients remaining in the land application area soils following the growing season. Nutrient budgets should be developed for the CAFO by the USDA-NRCS or any professional agronomist who is an active member of the American Society of Agronomy (ASA) and is certified by the ASA.

S. Process-Generated Wastewater means any process-generated wastewater directly or indirectly used in the operation of a feedlot for any or all of the following: spillage or overflow from animal or poultry watering systems; washing, cleaning, or flushing pens, barns, manure pits or other feedlot facilities, direct contact swimming, washing or spray cooling of animals; and dust control and any precipitation which comes into contact with any manure or litter, bedding, or any other raw material or intermediate or final material or product used in or resulting from the production of animals or poultry or direct products (e.g., milk, eggs).

T. Retention Facility or Retention Structures means all collection ditches, conduits and swales for the collection of runoff and wastewater, and all basins, ponds and lagoons used to store wastes, wastewaters and manures.

U. Severe Property Damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonable be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

V. The Act means Federal Water Pollution Control Act as amended, also known as the Clean Water Act, found at 33 USC 1251 et seq.

W. Toxic Pollutants means any pollutant listed as toxic under Section 307(a)(1) of the Act.

X. **Waters of the United States.** See 40 CFR 40 CFR 122.2

Y. Qualified Groundwater Scientist means a scientist, hydrogeologist, or engineer who has received a baccalaureate or post-graduate degree in natural sciences, geology, or engineering and has sufficient training and experience in groundwater hydrology and related fields as may be demonstrated by state registration, professional certification, or completion of accredited university programs that enable that individual to make sound professional judgements regarding ground water monitoring, contamination fate and transport, and corrective action [40 CFR 258.50(f)]

PART VIII. PERMIT CONDITIONS APPLICABLE TO SPECIFIC STATES AND INDIAN COUNTRY LANDS

1. STATE SPECIFIC PERMIT LANGUAGE FOR THE STATE OF NEW MEXICO:

This NPDES permit is intended to protect surface waters resources that are "waters of the United States" from contamination resulting from concentrated animal feeding operations through either surface of subsurface conveyance. This permit is not intended to protect ground water resources from contamination. Compliance with this permit does not absolve the permittee from the need to comply with New Mexico Water Quality Control Commission Regulations for the protection of ground water. For information on these state regulations please contact the New Mexico Environment Department, Groundwater Protection and Remediation Bureau, P.O. Box 26110, Santa Fe, New Mexico 87502 or call (505) 827-2900.

STATE SPECIFIC PERMIT LANGUAGE FOR THE STATE OF OKLAHOMA:

Any animal feeding operation (AFO) which applies for an NPDES general permit is required to obtain a separate Oklahoma Concentrated Animal Feeding Operation (CAFO) license. In addition, any AFO designated as a significant contributor of pollution by the Director of EPA Region 6 shall also obtain the Oklahoma CAFO license. For information on State requirements and application procedures, please contact the Oklahoma Department of Agriculture, Water Quality Services Division, 2800 North Lincoln Boulevard, Oklahoma City, Oklahoma 73105-4298, or call (405)-521-3864.

Limitations on Coverage. The following point source discharges are not authorized by this general permit:

Discharges from "new" Concentrated Animal Feeding Operations commencing operations after the effective date of the Oklahoma Water Quality Standards [Oklahoma Annotated Code Title 785, (Chapter 45) effective date June 25, 1992] to the following waters:

a. Waterbodies designated as "Outstanding Resource Waters" and/or "Scenic Rivers" in Appendix A of the Oklahoma Water Quality Standards;

b. Oklahoma waterbodies located within the watersheds of waterbodies designated as "Scenic Rivers" in Appendix A of the Oklahoma Water Quality Standards; and

c. waterbodies located within the boundaries of Oklahoma Water Quality Standards Appendix B areas which are specifically designated as "Outstanding Resource Waters" in Appendix A of the Oklahoma Water Quality Standards.

STATE SPECIFIC PERMIT LANGUAGE FOR THE STATE OF TEXAS:

Discharge Notification. If, for any reason, there is a discharge, the permittee is required to notify the Director in writing within 14 working days of the discharge from the retention facility. Written notification of discharges from retention structures to waters of the U.S. shall be reported to the State within five(5) working days. In addition the permittee shall include the following information to the pollution prevention plan within 14 days of becoming aware of such discharge.

ADDENDUM A - NOTICE OF INTENT FORM

NOTICE OF INTENT (NOI) to be Covered by the General Permit for Concentrated Animal Feeding Operations

This notification shall not be made to EPA, Region 6 if prohibited from coverage under Part I.D. of this permit.

Name and physical location of facility (include County name):_____
_____
_____

Mailing address for facility if different different from physical location_____
_____

Telephone Number:_____

Name of Operator:_____

Name, Address and Telephone Number of Owner (if different):_____
_____

Numbers and Type(s) of animals confined at the facility (e.g. feeder pigs, dairy cows, etc.):_____
_____

Total acreage occupied by the facility:_____

Latitude and Longitude Location of the Facility:

LATITUDE __ degrees __ minutes __ seconds
LONGITUDE __ degrees __ minutes __ seconds

Receiving stream (if known):_____

State Permit Number (if applicable):_____

Signature:

_____ _____
Signature must be in accordance with Part IV.H of the General Permit **Date Signed**

ADDENDUM B - NOTICE OF TERMINATION FORM

NOTICE OF TERMINATION (NOT)

NPDES Permit Number:_____
State Permit Number (if applicable):_____
Date NOI was submitted:_____

Name and location of facility (include County name):_____
_____
_____

Facility mailing address (if different from physical address)_____
_____

Telephone Number:_____

Name of Operator:_____

The following information is required only if changes have been made to the facility since the submittal of the Notice of Intent:

Name and Address of Owner (if different):_____
_____
_____

Numbers and Type(s) of animals confined at the facility (e.g. feeder pigs, dairy cows, etc.):_____
_____
_____

Total acreage occupied by the facility:_____
Latitude and Longitude Location of the Facility:
LATITUDE __ degrees __ minutes __ seconds
LONGITUDE __ degrees __ minutes __ seconds
Receiving Stream if known):_____

Reason for the termination of permit coverage:_____
_____
_____
(Add attached sheets if necessary.)

Signature:

_____ _____
Signature must be in accordance with Part IV.H of the General Permit. Date Signed

ADDENDUM C - BASIC FORMAT FOR ENVIRONMENTAL ASSESSMENT

BASIC FORMAT FOR ENVIRONMENTAL ASSESSMENT

This is the basic format for the Environmental Assessment prepared by EPA Region 6 from the review of the applicant's Environmental Information Document (EID) required for new source NPDES permits. Comprehensive information should be provided for those items or issues that are affected; the greater the impact, the more detailed information needed. The EID should contain a brief statement addressing each item listed below, even if the item is not applicable. The statement should at least explain why the item is not applicable.

A. General Information
   1. Name of applicant
   2. Type of facility
   3. Location of facility
   4. Product manufactured

B. Description Summaries
   1. Describe the proposed facility and construction activity
   2. Describe all ancillary construction not directly involved with the production processes
   3. Describe briefly the manufacturing processes and procedures
   4. Describe the plant site, its history, and the general area

C. Environmental Concerns
   1. Historical and Archeological (include a statement from the State Historical Preservation Officer)
   2. Wetlands Protection and 100-year Floodplain Management (the Army Corps of Engineers must be contacted if any wetland area or floodplain is affected)
   3. Agricultural Lands (a prime farmland statement from the Soil Conservation Service must be included)
   4. Coastal Zone Management and Wild and Scenic Rivers
   5. Endangered Species Protection and Fish and Wildlife Protection (a statement from the U.S. Fish and Wildlife Service must be included)
   6. Air, Water and Land Issues: quality, effects, usage levels, municipal services used, discharges and emissions, runoff and wastewater control, geology and soils involved, land-use compatibility, solid and hazardous waste disposal, natural and man-made hazards involved.
   7. Biota concerns: floral, faunal, aquatic resources, inventories and effects
   8. Community Infrastructures available and resulting effects: social, economic, health, safety, educational, recreational, housing, transportation and road resources

BASIC ENVIRONMENTAL INFORMATION DOCUMENT GUIDELINES
FOR NEW SOURCE CATEGORY INDUSTRIES - EPA REGION 6

I. General Information

A. Name of Applicant and Proposed Facility:

B. Description of Site and Location:

C. Description of Project, Product and Process:

ADDENDUM D - ADDRESSES

Advisory Council on Historic Preservation
1100 Pennsylvania Avenue, NW, Suite 809, Washington, DC 20004
Telephone: (202) 606-8503/8505 Fax: (202) 606-8647/8672
Email: achp@achp.gov

State Historic Preservation Officers (SHPOs)

New Mexico

Lynne Sebastian, SHPO, Historic Preservation Division, Office of Cultural Affairs
228 East Palace Avenue, Santa Fe, NM 87503
Telephone: (505) 827-6320 Fax: (505) 827-6338
E-mail: sebastian@arms.state.nm.us

David Cushman, deputy SHPO

Dorothy Victor, deputy SHPO
E-mail: nmshpo@arms.state.nm.us

Oklahoma

J. Blake Wade, SHPO, Oklahoma Historical Society
2100 N. Lincoln Boulevard, Oklahoma City, OK 73105
Telephone: (405) 521-2491 Fax: (405) 521-2492

Melvena Thurman Heisch, deputy SHPO, State Historic Preservation Office
2704 Villa Prom, Shepherd Mall, Oklahoma City, OK 73105
Telephone: (405) 521-6249 Fax: (405) 947-2918
E-mail: mheisch@oklaosf.state.ok.us

Texas

Curtis Tunnell, SHPO, Texas Historical Commission
P.O. Box 12276, Austin, TX 78711-2276
Telephone: (512) 463-6100 Fax: (512) 475-4872
E-mail: ctunnell@access.texas.gov
Web site: <a href=http://www.thc.state.tx.us>http://www.thc.state.tx.us

James Wright Steely, deputy SHPO, director, National Register Program
Telephone: (512) 463-6006 Fax: (512) 475-3122
E-mail: jsteely@access.texas.gov

Stanley O. Graves, deputy SHPO, director, Architecture Division
Telephone: (512) 463-6094 Fax: (512) 463-6095
E-mail: sgraves@access.texas.gov

James E. Bruseth, deputy SHPO, director, Antiquities Protection
Telephone: (512) 463-6096 Fax: (512) 463-8927
E-mail: jbruseth@access.texas.gov

ADDENDUM E - REFERENCES AND SUPPORTING DOCUMENTS

GENERAL REFERENCES

National Engineering Handbook Part 651, Agricultural Waste Management Field Handbook (1992) P.O. Box 2890, Washington, D.C. 20013.

Livestock Waste Facilities Handbook, MPWS-18, Extension Agricultural Engineer (1985) University of Missouri, Columbia, MO 65211.

STANDARDS 1992, Standards, Engineering Practices and Data, 39th Edition (1992) American Society of Agricultural Engineers, 2950 Niles Road, St. Joseph, MI 49085-9659.

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"Swine Lagoon Effluent Applied to Coastal Bermudagrass: I. Forage Yield, Quality, and Element Removal," J.C. Burns, P.W. Westerman, L.D. King, G.A. Cummings, M.R. Overcash, L.Goode (1985). Journal of Environmental Quality, 14:9-14.

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"Livestock Waste Characterization-a New Approach," C.L.Barth (1985). Agricultural Waste Utilization and Management, Proceedings of the Fifth International Symposium of Agricultural Wastes, ASAE, St. Joseph, MI, p. 286.

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WASTE MANAGEMENT PRACTICES

"Vegetative Filter Treatment of Dairy Milkhouse Wastewater," C.B. Schwer, J.C. Clausen (1989). Environmental Quality, 18:446-451.

"Cattle Feedlot Waste Management Practices for Water and Air Pollution Control," Dr. J.M. Sweeten (1990). Texas Agricultural Extension Service, B-1671.

"Dairy Manure Handling Systems and Equipment," Dr. J.M. Sweeten (1983). Texas Agricultural Extension Service, B-1446.

"Pollution Control for Dairy Farms," Dr. J.M. Sweeten (1982). Texas Agricultural Extension Service, B-1386.

"Waste Management System," SCS Conservation Practice Standard, Code 312 (1979). United States Department of Agriculture. Soil Conservation Service, Washington, D.C.

"Waste Storage Pond," SCS Conservation Practice Standard, Code 425 (1979). United States Department of Agriculture. Soil Conservation Service, Washington, D.C.

"Fencing," SCS Conservation Practice Standard, Code 382 (1980). United States Department of Agriculture. Soil Conservation Service, Washington, D.C.

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